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SPACE GATEWAY SUPPORT (SGS) **SGS-09 91 23.00 99 (April 2006)**

Preparing Activity: SGS-DE **Superseding SGS-09551J (February 2005)**

SGS GUIDE SPECIFICATIONS

References are NOT in Agreement with UMRL dated 01 April 2006

Revised throughout - changes not indicated by CHG tags
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SECTION 09 91 23.00 99

INTERIOR PAINTING
04/06

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NOTE: This guide specification covers the requirements for interior coating systems, including substrate repairs and replacements, surface preparation, and the extent of coating maintenance..

Brackets are used in the text to indicate designer choices or locations where text must be supplied by the designer.

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PART 1 GENERAL

This section specifies the following four areas for items associated with a facility undergoing coating maintenance:

a. Extent of Coating Maintenance
b. Surface Preparation
c. Substrate Repair/Replacement Methods
d. Coating Systems

These four areas contain specifications for various types of methods. For a particular item, the Contractor will be directed to specific sections in each of these four areas that will compile a precise coating maintenance specification specific to that item. The Contractor should be aware that these compiled coating maintenance specifications will vary for various items associated with the same facility.

1.1 REFERENCES

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NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a RID outside of the Section's

Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.

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The publications listed below form a part of this section to the extent referenced:

ASTM INTERNATIONAL (ASTM)

ASTM A 123/A 123M	(2002) Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 276/A 276M	(2004) Standard Specification for Stainless Steel Bars and Shapes
ASTM A 312/A 312M	(2004b)Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes
ASTM B 209/B 209M	(2004) Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
ASTM B 370	(2003) Standard Specifications for Copper Sheet and Strip for Building Construction
ASTM C 834	(2000e1) Latex Sealants
ASTM C 881/C 881M	(2002) Epoxy-Resin-Base Bonding Systems for Concrete

THE SOCIETY FOR PROTECTIVE COATINGS (SSPC)

SSPC SP 1	(1982; R 2000) Solvent Cleaning
SSPC SP 11	(1987; R 2000) Power Tool Cleaning to Bare Metal
SSPC SP 12	(1995) Surface Preparation and Cleaning of Steel and Other Hard Materials by High-and Ultra high-Pressure Water Jetting Prior to Recoating
SSPC SP 2	(1982; R 2000) Hand Tool Cleaning
SSPC SP 3	(1982; R 2000) Power Tool Cleaning
SSPC SP 6	(2000) Commercial Blast Cleaning

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 EXTENT OF COATING MAINTENANCE

This section explains the extent to which surface preparation shall be carried out by defining the three coating maintenance methods. Follow the extent of coating maintenance method referenced in the Project Engineer's compiled coating maintenance specification for a specific item.

3.1.1 Spot Touch-Up Only

The existing system is aesthetically sound with no apparent chalking of the existing coating system. Only minor areas of repair and touch-up work require attention. Execute the actual surface preparation method(s) referenced for a specific item in the Project Engineer's compiled coating maintenance specification in the following manner.

a. Prepare areas of coating deterioration down to substrate or a subsequent tightly adherent coating.

b. Prepare areas of corrosion down to bare metal.

c. Reference the appropriate procedures listed in paragraph 4.0 for areas requiring substrate repair.

d. Feather edge areas of intact coating system surrounding the prepared areas at a minimum of 2 inches into the existing topcoat to ensure a smooth transition from the prepared area to the existing topcoat. This will help prevent lifting and ensure an aesthetic finish.

e. Clear the local area surrounding the repair of dirt, mildew, or other foreign matter that will hinder the adhesion of the applied coating system. Cleaning the localized areas will accommodate the minimum application of topcoat to a neatly squared off touch-up area.

3.1.2 Spot Touch-Up And Overcoat

The existing coating system will support application of an additional coating system once chalking and localized areas requiring touch-up and repair are addressed. Execute the actual surface preparation method(s) referenced for a specific item in the Project Engineer's compiled coating maintenance specification in the following manner:

a. Prepare areas of coating deterioration down to substrate or a subsequent tightly adherent coating.

b. Prepare areas of corrosion down to bare metal.

c. Reference the appropriate procedures listed in paragraph 3.3 for areas requiring substrate repair.

d. Feather edge areas of intact coating system surrounding the prepared areas at a minimum of 2 inches into the existing topcoat to ensure a smooth transition for the prepared area to the existing topcoat. This will help prevent lifting and ensure an aesthetic finish.

e. Clean the entire surface of the item undergoing coating maintenance of chalking, dirt, mildew or other foreign matter that will hinder the

adhesion of the applied coating system.

f. Scarify (sand) areas of gloss finish to remove gloss finish and allow adhesion of new applied overcoat.

3.1.3 Complete Removal And Repaint

Extent of coating deterioration has degraded past the point of effectively supporting subsequent coating system application; therefore, total coating removal is necessary. Execute the actual surface preparation method(s) referenced for a specific item in the Project Engineer's compiled coating maintenance specifications in the following manner:

a. Reference the appropriate procedures listed in paragraph 3.3 for area requiring substrate repair.

b. Completely remove all coating systems down to bare substrate.

3.2 SURFACE PREPARATION METHODS

The surface preparation references directed by the Project Engineer correspond to standard surface preparation methods assigned by the Society for Protective Coatings (SSPC) listed in 1.1, "References" of this section.

The individual and combined surface preparation methods that are referenced by the Project Engineer are described in this section to address specific details pertaining to various substrates.

Use these methods to prepare the surface to the extent necessary (paragraph 3.1, "Extent of Coating Maintenance") to accomplish surface preparation in.

Note: Proper containment, Project Engineering controls, and personal protective equipment must be implemented in accordance with Section 02 83 00.00 99 LEAD REMEDIATION if it is determined that the surface to be disturbed contains lead-based paint(LBP).

Implement controls to ensure all paint chips and debris generated from surface preparation are contained, handled and disposed of properly in accordance with Section 01 35 43.00 99 ENVIORMENTAL PROCEDURES. These containments may consist of, but are not limited to ground tarpaulins, ground screens, hanging tarpaulins and hanging screens to control paint debris and mist travel from pressure washing.

Prior to commencing any of the following surface preparation methods, inspect all items to be prepared for visible signs of oil and grease. If oil and/or grease are noticed, solvent clean these surfaces in accordance with the guidelines set forth in SSPC SP 1.

3.2.1 SP-2

Prepare the surface using hand tools to accomplish surface preparation in accordance with the predetermined coating maintenance method and the SSPC guidelines for SSPC SP 2.

Exercise care not to damage the existing textured ground coat of the exterior insulation finish system (EIFS). However, if damage to the ground coat does occur due to the negligence of the Contractor, repair at not cost to the Government.

3.2.2 SP 2*

Prepare the surface using hand tools to accomplish surface penetration in accordance with the predetermined coating maintenance method and in accordance with SSPC SP 2.

Exercise care as not to disturb the asbestos material.

3.2.3 SP 2/SP 3

Prepare the surface using hand and/or power tools as necessary to accomplish surface preparation in accordance with the predetermined coating maintenance method and SSPC SP 2 and SSPC SP 3.

Exercise care in choosing appropriate power tools such that the substrate is not damaged. However, if damage to the substrate does occur due to the aggressive nature of the power tool used, repair at no cost to the Government.

3.2.4 SP 6

Remove all coatings using abrasive blasting in accordance with SSPC SP 6 commercial blasting, recognizing that the requirements for remaining surface staining of previously existing coatings will also apply to masonry surfaces.

Adjust output pressures to accommodate production rates and ensure integrity of the existing substrate. Use uniform blast profile of 1.50 to 2.5 mils for metallic substrates (not to exceed 3.5 mils). Vacuum blast units may be utilized. However, open-air blasting is not permitted.

Use a Class 3A(minimum) containment(assuming no lead hazard) in accordance with SSPC SP 6 for proper containment for abrasive blasting.

Properly mask and protect items in the immediate vicinity that are not intended to be abrasively blasted to ensure they are not damaged. However, if these items are damaged, repair or replace these items at the discretion of the Project Engineer at no cost to the Government.

3.2.5 SP 11

Remove all coatings using power tool cleaning methods to prepare the metallic substrate to bare metal in accordance with SSPC SP 11. A surface profile of 1.5 to 2.0 mils is required.

Exercise care in choosing appropriate power tools such that the substrate(thin metal) is not damaged. However, if damage to the substrate does occur due to the aggressive nature of the power tool used, repair or replace the item at no cost to the Government.

3.2.6 SP 12 LOW PRESSURE WATER CLEANING (LPWC), SP 2/SP3

Remove all topcoat chalking, dirt, and miscellaneous surface contaminates using LPWC in accordance with SSPC SP 12, with a minimum output pressure of 2000 psi fresh, potable water.

Clean items from the top down so as not to contaminate lower sections during work on higher areas. A secondary rinse will be required if cross contamination occurs. This pressure cleaning may remove most areas of

loose paint. However, areas where loose paint was removed by pressure washing requires hand tool power tool cleaning in accordance with SSPC SP 2 and SSPC SP 3 to ensure areas of loose paint have been removed back to tightly adhered coatings.

Exercise care in choosing appropriate power tools such that the substrate is not damaged. However, if damage to the substrate does occur due to the aggressive nature of the power tool used, repair at no cost to the Government.

Use these methods to prepare the surface to the extent necessary to accomplish surface preparation in accordance with the predetermined coating maintenance method.

3.2.7 SP 12(LPWC), SP 2

Remove all topcoat chalking, dirt, and miscellaneous surface contaminates using LPWC in accordance with SSPC SP 12, with a minimum output pressure of 2000 psi fresh, potable water.

Clean items from the top down so as not to contaminate lower sections during work on higher areas. A secondary rinse will be required if cross contamination occurs. This pressure cleaning may remove most areas of loose paint. However, areas where loose paint was removed by pressure washing requires hand tool power tool cleaning in accordance with SSPC SP 2 to ensure areas of loose paint have been removed back to tightly adhered coatings.

Exercise care not to damage the existing textured ground coat of the EIFS. However, if damage to the ground coat does occur due to the negligence of the Contractor, repair at no cost to the Government.

Use these methods to prepare the surface to the extent necessary to accomplish surface preparation in accordance with the predetermined coating maintenance method.

3.2.8 SP 12(LPWC), SP 2*

Remove all topcoat chalking, dirt, and miscellaneous surface contaminates using LPWC in accordance with SSPC SP 12, with a minimum output pressure of 2000 psi fresh, potable water.

Clean items from the top down so as not to contaminate lower sections during work on higher areas. A secondary rinse will be required if cross contamination occurs. This pressure cleaning may remove most areas of loose paint. However, areas where loose paint was removed by pressure washing requires hand tool power tool cleaning in accordance with SSPC SP 2 to ensure areas of loose paint have been removed back to tightly adhered coatings.

Exercise care not to disturb the asbestos material.

Use these methods to prepare the surface to the extent necessary to accomplish surface preparation in accordance with the predetermined coating maintenance method.

3.2.9 SP 12 LP/HIGH PRESSURE WC(LP/WC WC)

Remove all coatings using either LPWC(2000-5000 psi) or HPWC(5000-10000

psi), choosing the minimum output pressure of fresh, potable water necessary to effectively remove the coating system in accordance with the requirements of SSPC SP 12 WJ-3.

Clean items from the top down so as not to contaminate lower sections during work on higher areas. A secondary rinse will be required if cross contamination occurs. Due to the pressures involved, open-air water cleaning/jetting is not permitted.

Use a Class 3W(minimum) containment(assuming no lead) in accordance with SSPC SP 6 for proper containment of all paint and blasting debris.

Properly mask and protect items in the immediate vicinity that are not intended to be water cleaned/jetted to ensure they are not damaged. However, if these items are damaged, repair or replace these items at the discretion of the Project Engineer at no cost to the Government.

3.2.10 SP 12 HPWC/WATER JETTING(HP WC/WJ)

Remove all coatings using either HPWC(5000-10000 psi) or HPWJ(10000-25000 psi), choosing the minimum output pressure of fresh, potable water necessary to effectively remove the coating system in accordance with the requirements of SSPC SP 12 WJ-3.

Clean items from the top down so as not to contaminate lower sections during work on higher areas. A secondary rinse will be required if cross contamination occurs. Due to the pressures involved, open-air water cleaning/jetting is not permitted.

Use a Class 3W(minimum) containment(assuming no lead) in accordance with SSPC SP 6 for proper containment of all paint and blasting debris.

Properly mask and protect items in the immediate vicinity that are not intended to be water cleaned/jetted to ensure they are not damaged. However, if these items are damaged, repair or replace these items at the discretion of the Project Engineer at no cost to the Government.

3.3 SUBSTRATE REPAIR/REPLACEMENT METHODS

Perform the repairs/replacement of substrate in accordance with the procedures referenced in this section.

3.3.1 Joint Repair

The intent of joint repair is to ensure water tight expansion control joints between the masonry block and cast concrete, as well as around windows and doors.

a. Route joints to remove any deteriorated caulking/sealant compounds. Caulking that has good adhesion need not be removed, as determined by Inspector or Project Engineer.

b. Repair all joints in the Interior of buildings and around doors and windows having deteriorated caulking and replace with new caulking.

c. Caulk all open joints. Force caulking into the joints in a manner to expel all air and fill the joint solidly and to ensure a uniformly smooth surface, free of voids.

d. Use Green-Rod, Denverfoam or polyethylene tape behind sealant in expansion joints to provide backing material.

The following one-part acrylic latex sealant products meet the requirements of ASTM C 834 and are approved for use:

Manufacturer	Product
Duron	Magnum XL 40 Year Latex Silicone Adhesive Sealant
Tremco	Tremco Acrylic Latex 834
Sonneborn	Sonolac, General Purpose Gun-Grade Caulk

3.3.2 CMU, Concrete and Stucco Crack and Hole Repair

Using hand and power tools, remove all old paint and caulking from cracks and holes in substrate.

Feather back intact coating a minimum of 2 inches on either side of the crack/hole receiving repair to ensure a smooth appearance for subsequent coating application.

Apply epoxy cement to fill cracks and holes.

Follow procedures outlined for preparation and application of epoxy patching compounds for crack and hole repair.

The following epoxy patching compounds are in accordance with ASTM C 881/C 881M, and are approved for use:

Manufacturer	Product
Sika	Sikadur 23, Lo-Mod Gel (large patches)
Sika	Sikadur 31, Hi-Mod Gel (vertical and overhead cracks)
Sonneborn	EpoFil, Lo-Mod Gel (large patches)
Sonneborn	EpoFil, Hi-Mod Gel (vertical and overhead cracks)

3.3.3 Spray Texture Ceilings Repair

Follow the procedures outlined in section 09 56 00.00 99 TEXTURED CEILINGS.

3.3.4 Wood Repair/Replacement

3.3.4.1 Repair

a. Nail loose boards and trim with finishing nails.

b. Countersink and putty.

c. Fill all holes and imperfection with plastic wood filler.

3.3.4.2 Replacement

Interior wood that requires replacement shall be replaced with like material and style as referenced in UFGS section 06 10 00 ROUGH CARPENTRY and UFGS Section 06 20 00 FINISH CARPENTRY.

3.3.4.3 Replacement of Wood Doors and Frames

Refer to guidelines set forth in UFGS Section 08 14 00.00 40 WOOD DOORS.

3.3.5 Metal Repair/Replacement

3.3.5.1 Sheet Metal Repair

a. Cut out all sheet metal with pitting more than 50% through material.

b. De-rust adjacent metal and replace with material identical to adjacent metal as specified under products.

c. Immediately prime all new surfaces.

d. Seal all patches with sealant specified in Section 07 92 00 JOINT SEALANTS such that water cannot migrate behind repair.

e. Bend all metal to match configuration of adjacent surfaces.

f. Slope so as to ensure water cannot be trapped or let stand.

g. Replace with same where galvanized wind uplift anchors are deteriorated. Inform CO if anchors are deteriorated beyond the point of identification.

h. Match replacement metals in accordance with the following:

Copper: ASTM B 370; temper H00 (cold-rolled) except where temper 060 is required for forming; 16 oz. (0.0216-inch thick) except as otherwise indicated.

Sheet Aluminum: ASTM B 209/B 209M, alloy 3003, temper H14, AA-C22A41 black anodized finish; 0.032-inch thick (20 gauge) except as otherwise indicated.

Extruded Aluminum: Manufacturer's standard extrusions of sizes and profiles indicated, 60063-T52, AA-C22A41 bronze anodized finish; 0.080-inch minimum thickness for primary legs of extrusions.

Mild Steel: AISC grade A-36, galvanized ASTM A 123/A 123M, hot dip

Stainless Steel: Bars ASTM A 276/A 276M, pipe ASTM A 312/A 312M, grade TP 304

Mild Steel: AISC grade A-36, galvanized ASTM A 123/A 123M

i. Refer to the following metal references:

Copper Roofing - A Practical Handbook
NRCA(National Roofing Contactors Association) - Roofing Manual
SMACNA - Architectural Sheet Metal Manual
Galvanized Steel - National Association of Corrosion Project Engineers Manual
Stainless Steel - AISI Stainless Steel Cold Formed Structural Design Manual
Mild Steel - AISI Stainless Steel Cold Formed Structural Design Manual

3.3.5.2 Structural Steel, Ladder, Railing Repair

Follow the guidelines referenced in Section 05 50 00.00 99 METAL FABRICATIONS.

3.3.5.3 Steel Door and Frame Replacement

Follow the guidelines referenced in Section 08 11 13.00 99 HOLLOW METAL DOORS AND FRAMES.

3.3.5.4 Aluminum Door and Frame Replacement

Follow the guidelines referenced in UFGS Section 08 11 16.00 40 ALUMINUM DOORS AND FRAMES.

3.3.5.5 Overhead Coiling Doors

Follow the guidelines in Section 08 33 23.00 40 OVERHEAD COILING DOORS.

3.3.5.6 Door Hardware

Follow the guidelines in UFGS section 08 71 00.00 40 DOOR HARDWARE.

3.3.6 Gypsum Repair/Replacement

For small holes(less than 1" x 2") and defects in Interior gypsum board, patch and finish with Interior gypsum patching compound.

For large defects or holes (greater than 1" x 2"), remove deteriorated gypsum board and replace/finish area with Interior new section of gypsum board and Interior gypsum compound.

Follow the procedures outlined in UFGS Section 09 23 00.00 40 GYPSUM PLASTERING and Section 09 29 00.00 40 GYPSUM BOARD.

3.3.7 Transite (Asbestos Board) Hole Repair

Without disturbing the asbestos material, apply epoxy patching compound in accordance with UFGS Section 07 92 00.00 40 JOINT SEALANTS.

3.3.8 Alternate Methods of Repair

Other types of repair or replacement or architectural type materials may be referenced that do not directly fall within the categories typically associated with maintenance coating work. The following is a list of specification sections which contain guidelines for these types of repairs and/or replacements.

Section 08 15 00.00 99 PLASTIC DOORS
Section 10 14 11 EXTERIOR SIGNAGE
Section 10 14 12 INTERIOR SIGNAGE

Project Engineer will specify type of repair or replacement on an individual basis for specialty type materials.

3.4 COATING SYSTEMS

The compiled coating maintenance specification provided by the Project

Engineer references the appropriate Interior coating system number for a specific item. Any approved coating system for a referenced Interior coating system number may be used under the following conditions:

Use the coating system from the same manufacturer on a specific substrate. Mixing primers and topcoats from different manufacturers is not permitted.

Approved coating systems from different manufacturers may be used on different substrates on the same facility.

Prior to coating application, ensure surfaces are free of oil, dust, dirt, etc. Solvent clean areas of oil contamination in accordance with SSPC SP 1. Solvent wipe, vacuum, or duct areas of dust or dirt to the satisfaction of the onsite inspector.

The color and finish (i.e. satin, semi-gloss, gloss, etc.) to be used on specific items is specified in the compiled coating maintenance specification.

Apply materials by brush or roller. Spray application may be allowed if containment in accordance with SSPC SP 6 Class 2P containment with an overlap entryway is used.

Observe all recoat windows (minimum and maximum) per manufacturer's data sheets. Application of coatings are not allowed on damp surfaces. Application of coatings are not permitted when the surface temperature is the substrate is less than 5 degrees F below the dew point, or below 50 degrees F(10 degrees C), or if the relative humidity is greater than 80%, unless manufacturer's data sheets indicate otherwise.

The Inspector will monitor coating thickness measurements on substrates after sufficient cure and prior to application of additional coats. This is to ensure proper coating thickness for individual coats according to each Interior coating reference.

3.4.1 Interior 1

Refer to table 1 for high-performance acrylic primer and acrylic topcoat for concrete masonry units (CMU), stucco, and formed concrete (no moisture problems); Interior insulating finish systems; and transite.

Table 1. High-Performance Acrylic Primer and Acrylic Topcoat for CMU's, Stucco, and Formed Concrete(no moisture problems); Interior Insulating Finish Systems; Transite

Sherwin Williams	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	ProMar 200 Interior Latex Wall Primer	28	Vinyl Acrylic	89
Topcoat-flat	ProMar 200 Interior Latex Flat Wall Paint, B30W200 Series	35	Vinyl Acrylic	53
Topcoat-Egg-Shell	ProMar 200 Interior Latex Egg-Shell Wall Paint, B20W200 Series	39	Vinyl Acrylic	147

Sherwin Williams	Product Name	% Solids volume	Resin Type	VOC (g/L)
Topcoat-s/g	ProMar Interior Latex Semi-Gloss Wall Paint, B31 Series	33	Vinyl Acrylic	123
Topcoat-gloss	ProMar Interior Latex Gloss Wall Paint, B21 Series	38	Vinyl Acrylic	189

Duron	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	Acrylic Enamel Undercoater	39	Vinyl Acrylic	134
Topcoat-flat	Ultra Delux Interior Acrylic Latex Flat, 17 Series	32	Vinyl Acrylic	<250
Topcoat-Satin	Ultra Delux Interior Acrylic Latex Low Sheen Enamel, 36 Series	35	Vinyl Acrylic	<250
Topcoat-s/g	Ultra Delux Interior Acrylic Latex Semi-Gloss Enamel, 35 Series	34.3	Vinyl Acrylic	<250
Topcoat-gloss	Ultra Delux Interior Acrylic Latex High Gloss Enamel. 25 Series	37	Vinyl Acrylic	<250

ICI	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	Aquacrylic GRIPPER 3210		Acrylic	
Topcoat-flat	Ultra-Hide Latex Flat Wall Paint	32	Vinyl Acrylic	101
Topcoat-satin	Ultra-Hide Latex Eggshell Enamel	36	Vinyl Acrylic	109
Topcoat-s/g	Ultra-Hide Latex Semi-Gloss Enamel	36	Vinyl Acrylic	151

Benjamin Moore	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	Freshstart023	31	Acrylic	<250
Topcoat-satin	Regal Wall Satin 215	33	Acrylic	<250
Topcoat-Eggshell	Regal AquaPearl 310	35	Vinyl Acrylic	<250
Topcoat-s/g	Regal AquaGlo 33	34	Vinyl Acrylic	<250

Pittsburgh	Product Name	% Solids volume	Resin Type	VOC (g/L)

Pittsburgh	Product Name	volume	Type	(g/L)
Primer	Speedhide Quick-Drying Interior Latex Primer Sealer	28.4	Vinyl Acrylic	<250
Topcoat-flat	Speedhide 6.70	35	Acrylic	<250
Topcoat-Eggshell	Speedhide 6-411	36	Acrylic	<250
Topcoat-s/g	Monor Hall Semi-Gloss Acrylic Latex Interior Wall & Trim Paint	35	Acrylic	<250
Topcoat-s/g	Speedhide Interior Latex 100% Acrylic Gloss Enamel 6-8534	30	Acrylic	<250

MAB	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	Rich Lux Latex Sealer & Undercoater	39	Acrylic	180
Topcoat-flat	Rich Lux Lustre-Lite Flat Enamel	34	Vinyl Acrylic	250
Topcoat-satin	Rich Lux Low Lustre Latex Enamel	35	Acrylic	250
Topcoat-s/g	Rich Lux Semi-Gloss Latex Enamel	35	Acrylic	250
Topcoat-gloss	Rich Lux Arch. High Gloss Latex Enamel	35	Acrylic	240

3.4.1.1 Coating Application for Interior 1

Dry Film Thickness Schedule

Prime Coat: 2.0 mils DFT minimum
Topcoat: 2 coats at 2.0 mils DFT minimum each coat

Spot Touch-Up Only Method

Apply a spot coat primer application to areas down to bare substrate.

Apply two topcoat applications to the area of repair in a squared off fashion such that the smallest possible rectangular patch is used to cover the area of repair.

Spot Touch-Up and Overcoat Method

Apply a spot coat primer application to areas down to bare substrate.

Apply two complete topcoat applications to the entire paintable surface.

Complete Removal and Paint

Apply one full coat primer and two full coat topcoat applications to the entire paintable surface.

3.4.2 Interior 2

Refer to table 2 for acrylic primer and acrylic topcoat for wood.

Table 2. Acrylic Primer And Acrylic Topcoat For Wood

Sherwin Williams	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	ProMar 200 Alykd Enamel Undercover	47	Alykd	411
Topcoat-flat	ProMar 200 Interior Latex Flat Wall Paint, B30W200 Series	35	Vinyl Acrylic	53
Topcoat-Eggshell	ProMar 200 Interior Latex Eggshell Wall Paint, B20W200 Series	39	Vinyl Acrylic	147
Topcoat-s/g	ProMar Interior Latex Semi-Gloss Wall Paint, B31 Series	33	Vinyl Acrylic	123
Topcoat-gloss	ProMar Interior Latex Gloss Wall Paint, B31 Series	33	Vinyl Acrylic	123

Duron	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	Wall Kote Interior Alkyd Enamel Undercoat	55	Alkyd	<350
Topcoat-flat	Ultra Delux Interior Acrylic Latex Flat, 17 series	32	Vinyl Acrylic	<250
Topcoat-satin	Ultra Delux Interior Acrylic Latex Low Sheen Enamel, 36 series	35	Vinyl Acrylic	<250
Topcoat-s/g	Ultra Delux Interior Acrylic Latex Semi-Gloss Enamel, 35 series	34.3	Vinyl Acrylic	<250
Topcoat-gloss	Ultra Delux Interior Acrylic Latex High Gloss Enamel, 25 series	37	Vinyl Acrylic	<250

ICI	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	Aquacrylic GRIPPER 3210		Acrylic	
Topcoat-	Ultra-Hide Latex Flat	32	Vinyl	101

ICI	Product Name	volume	Type	(g/L)
flat	Wall Paint		Acrylic	
Topcoat-satin	Ultra-Hide Latex Eggshell Enamel	36	Vinyl Acrylic	109
Topcoat-s/g	Ultra-Hide Latex Semi-Gloss Enamel	36	Vinyl Acrylic	151

Benjamin Moore	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	Freshstart023	31	Acrylic	<250
Topcoat-satin	Regal Wall Satin 215	33	Acrylic	<250
Topcoat-Eggshell	Regal AquaPearl 310	35	Vinyl Acrylic	<250
Topcoat-s/g	Regal AquaGlo 33	34	Vinyl Acrylic	<250

Pittsburgh	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	17-21 Sealgrip Latex Enamel Undercoater	30	Vinyl Acrylic	<250
Topcoat-flat	Speedhide	35	Acrylic	<250
Topcoat-Eggshell	Speedhide	36	Acrylic	<250
Topcoat-s/g	Speedhide	35	Acrylic	<250
Topcoat-	Speedhide Interior Latex 100% Acrylic Gloss Enamel	30	Acrylic	<250

3.4.2.1 Coating Application for Interior 2

Dry Film Thickness Schedule

Prime Coat: 2.0 mils DFT minimum
Topcoat: 2 coats at 2.0 mils DFT minimum each coat

Spot Touch-Up Only Method

Apply a spot coat primer application to areas down to bare substrate.

Apply two topcoat applications to the area of repair in a squared off fashion such that the smallest possible rectangular patch is used to cover the area of repair.

Spot Touch-Up and Overcoat Method

Apply a spot coat primer application to areas prepared down to bare substrate.

Apply two complete topcoat applications to the entire paintable surface.

Complete Removal and Paint

Apply one full coat primer and two full coat topcoat applications to the entire paintable surface. If no midcoat is listed in the approved coating system, apply two topcoat applications.

Note: If this item is replaced with a new piece of wood, apply one full coat primer to all surface and edges of the new piece prior to installation. Contractor will be compensated for this additional prime coat application.

3.4.3 Interior 3

Refer to table 3 for DMT acrylic primer and acrylic topcoat for miscellaneous steel metals.

Table 3. DMT Acrylic Primer And Acrylic Topcoat For Miscellaneous Steel Metals

Sherwin Williams	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	DTM Acrylic Primer	46	Acrylic	138
Topcoat-s/g	Metalatex Semi-Gloss Coating	36	Acrylic	125
Topcoat-gloss	DTM Acrylic Gloss Coating	39	Acrylic	230

Duron	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	Universal Acrylic Metal Primer, 33-105	37	Acrylic	<450
Topcoat-s/g	DTM Acrylic Coatings Semi-Gloss series 95-06X	43	Acrylic	<450
Topcoat gloss	DTM Acrylic Coatings Gloss series 95-05X	36	Acrylic	205

Ameron	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	Amercoat 148	41	Acrylic	193
Topcoat-satin	Amercoat 220	35	Acrylic	180
Topcoat-s/g	Amercoat 220	35	Acrylic	180

Carboline	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	Carboline D3358	36	Acrylic	75
Topcoat-s/g	Carboline 3350	36	Acrylic	283

Carboline Pittsburgh	Product Name Product Name	% Solids volume	Type Resin Type	(g/L) VOC (g/L)
Primer	Pitt-Tech One Pack Int./Ext. DTM Industrial Enamels	37	Acrylic	<250
Topcoat-satin	Pitt-Tech One Pack Int./Ext. High Performance Waterbourne Satin DTM Industrial Enamels	37	Acrylic	<250
Topcoat-gloss	Pitt-Tech One Pack Int./Ext. High Performance Waterbourne High Gloss DTM Industrial Enamels	37	Acrylic	<250

Benjamin Moore	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	M04 Acrylic Metal Primer	40	Acrylic	51
Topcoat-s/g	M29 DTM Acrylic Semi-gloss	40	Acrylic	207
Topcoat-gloss	M28 Acrylic Gloss Enamel	34	Acrylic	243

3.4.3.1 Coating Application for Interior 3

Dry Film Thickness Schedule

Prime Coat: 2.0 mils DFT minimum
Topcoat: 2 coats at 3 mils DFT minimum each coat

Spot Touch-Up Only Method

Apply a spot coat primer application to areas prepared down to bare substrate.

Apply two topcoats in a squared off fashion such that the smallest possible rectangular patch is used to cover the area of repair.

Spot Touch-Up and Overcoat Method

Apply a spot coat primer application to areas down to bare substrate.

Apply two complete topcoat applications to the entire paintable surface.

Complete Removal and Paint

Apply one full coat primer, midcoat and topcoat application to the entire paintable surface.

3.4.4 Interior 4

These coatings are exempt from the 3.5lb/gal(420 g/l) VOC restriction. Refer to table 4 for high temperature service greater than 300 degrees F.

Table 4. High Temperature Service Greater Than 300 Degrees F.

Carboline	Product Name	% Solids volume	Resin Type	VOC (g/L)

Carboline	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	CarboZinc 11	N/A	Zinc Silicate	492
Topcoat-gloss	Carboline 1248	40	Silicon Acrylic	540

Benjamin Moore	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	M66-77/M65 High Heat Coating Zinc Gray	49	Silicone	441
Topcoat-Aluminum	M66-78 High Heat Aluminum	40	Silicone	561
Topcoat-Black	M66-80 High Heat Coating Black	40	Silicone	518

Duron	Product Name	% Solids volume	Resin Type	VOC (g/L)
Primer	Heat Resistant Aluminum 94-114	41	Alkyd	493
Topcoat	Heat Resistant Aluminum 94-114	41	Alkyd	493

3.4.4.1 Coating Application for Interior 4

Dry Film Thickness Schedule

Prime Coat: 1.5-2 mils DFT minimum
Topcoat: 2 coats at 1-1.5 mils DFT each coat

Spot Touch-Up and Overcoat Method

Apply a spot coat primer application to areas of the item prepared down to the bare substrate.

Apply two topcoats in a squared off fashion such that the smallest possible rectangular patch is used to cover the area of repair.

Spot Touch-Up and Overcoat Method

Apply a spot coat primer application to areas prepared down to bare substrate.

Apply two complete topcoat applications to the entire paintable surface.

Complete Removal and Paint

Apply one full coat primer, and two full coat topcoat applications to the entire paintable surface.

3.4.5 Interior 5

Refer to table 5 for acrylic topcoat for miscellaneous non-ferrous metal,

galvanized metals, and PVC.

Table 5. Acrylic Topcoat For Miscellaneous Non-Ferrous Metal, Galvanized Metals, And PVC

Sherwin Williams	Product Name	% Solids volume	Resin Type	VOC (g/L)
Topcoat-s/g	Metalatex Semi-Gloss Coating	36	Acrylic	125
Topcoat-gloss	DTM Acrylic Gloss Coating	39	Acrylic	230

Duron	Product Name	% Solids volume	Resin Type	VOC (g/L)
Topcoat-s/g	DTM Acrylic Coatings Semi-Gloss series 95-06X	43	Acrylic	<450
Topcoat gloss	DTM Acrylic Coatings Gloss series 95-05X	36	Acrylic	205

Ameron	Product Name	% Solids volume	Resin Type	VOC (g/L)
Topcoat-satin	Amercoat 220	35	Acrylic	180
Topcoat-s/g	Amercoat 220	35	Acrylic	180

Carboline	Product Name	% Solids volume	Resin Type	VOC (g/L)
Topcoat-s/g	Carboline 3350	36	Acrylic	283

Pittsburgh	Product Name	% Solids volume	Resin Type	VOC (g/L)
Topcoat-satin	Pitt-Tech One Pack Int./Ext. High Performance Waterbourne Satin DTM Industrial Enamels	37	Acrylic	<250
Topcoat-gloss	Pitt-Tech One Pack Int./Ext. High Performance Waterbourne High Gloss DTM Industrial Enamels	37	Acrylic	<250

Benjamin Moore	Product Name	% Solids volume	Resin Type	VOC (g/L)
Topcoat-s/g	M29 DTM Acrylic Semi-gloss	40	Acrylic	207

3.4.5.1 Coating Application for Interior 5

Due to the nature of these coatings and the type of substrates involved, an individual primer is not required.

Dry Film Thickness Schedule

Topcoat: 3 coats at 2-3 mils DFT minimum each coat

Spot Touch-Up Only Method

Apply a single spot coat primer application to areas down to bare substrate.

Apply two topcoat applications in a squared off fashion such that the smallest possible rectangular patch is used to cover the area of repair.

Spot Touch-Up and Overcoat Method

Apply a single spot coat primer application to areas prepared down to bare substrate.

Apply two full coat topcoat applications to the entire paintable surface.

Complete Removal and Paint

Apply three full coat topcoat applications to the entire paintable surface.

3.5 TEXTURE 1

This coating system is intended for spray texture "popcorn" ceilings only.

For ceilings consisting of concrete, gypsum, plaster or other masonry type surface, select the approved primers and topcoats from the coatings listed in Table 1.

For ceilings consisting of wood substrates, select the approved primers and topcoats from the coatings listed in Table 2.

For ceilings consisting of metallic substrates, select the approved primers and topcoats from the coatings listed in Table 3.

3.5.1 Coating Application for Texture 1

Due to the nature of these coatings, appropriate spray application equipment is required, as well as appropriate overspray protection of surrounding areas.

Dry Film Thickness Schedule:

Prime Coat:	2.0 mils DFT minimum
Texture Coat:	As per manufacturer's data sheet
Topcoat:	2 coats at 2 mils DFT minimum each coat

Topcoat application is only required for the Spot Touch-Up Only and Spot Touch-Up and Overcoat scenarios.

Spot Touch-Up Only Method

Apply a spot coat primer application to areas of the ceiling prepared down to the bare substrate, followed by spot application of textured finish after primer has sufficiently cured.

Apply two topcoat applications in a squared off fashion such that the smallest possible rectangular patch is used to cover the area of repair.

Spot Touch-Up and Overcoat Scenario

Apply a spot coat primer applications to areas of the ceiling prepared down to the bare substrate, followed by spot application of textured finish after primer has sufficiently cured.

Apply two complete topcoat applications to the entire paintable ceiling surface.

Complete Removal and Repaint

Apply one full coat primer and one full coat finished color textured coat, determined by the Project Engineer, applications to the entire paintable surface.

3.6 STAIN

The following procedure applies for determining the type of stain and urethane clear finish required for interior wood staining finish.

Fabricate sample swatches of wood identical in type and cut to original in-place wood. The sample swatches shall be a minimum of 6 inches long and of identical width and cut of existing wood trim.

Stain the sample swatches with various tints of a commercial wood stain supplier(i.e. Min-Wax, Zip-Guard, etc.). Produce a sufficient number of swatches to allow each 6-inch sample be dedicated to only one tint of stain.

Urethane the stained sample swatches with a clear finish that exists on the in-place original wood(i.e. stain, semi-gloss, or gloss).

Compare the stained and urethaned sample swatches to the existing, in-place finished wood undergoing maintenance. The Project Engineer or Inspector shall determine which swatch best matches the existing system.

Once the type of stain and finish of urethane has been determined, the following procedures for the various repair scenarios shall be performed.

3.6.1 Coating Application for Stain

General Procedure:

Apply stain liberally and allow to saturate the wood surface.

Prior to drying, wipe the stained surface with a clean rag to remove residual stain. Do not topcoat the stain with urethane until 24 hours of drying time have elapsed.

Prior to application of urethane, lightly rub the stained surface with fine grade steel wool to smooth the surface and wipe dust from the surface with a clean cloth damp with mineral spirits. Allow mineral spirits t flash off completely prior to application of urethane.

Apply first coat of urethane.

When cured, lightly rub with fine grade steel wool and wipe with clean cloth damp with mineral spirits. Allow mineral spirits to flash off completely prior to application of second coat of urethane.

Apply second coat of urethane.

Ensure surface is smooth and free of bubbles when final coat of urethane is cured.

Perform and rework as required by Inspector.

Spot Touch-Up Only Method

Apply a spot coat of stain to areas prepared down to bare wood.

Apply two urethane topcoat applications in a squared off fashion such that the smallest possible rectangular patch is used to cover the area of repair.

Spot Touch-Up and Overcoat Method

Apply a spot coat stain application t areas prepared down to the bare wood.

Apply two complete urethane applications to the entire coatable surface of wood.

Lightly sand previously urethaned surfaces with 220 grit sandpaper to remove gloss prior new urethane application.

Complete Removal and Repaint

Follow the procedure described above in "General Procedure".

-- End of Section --